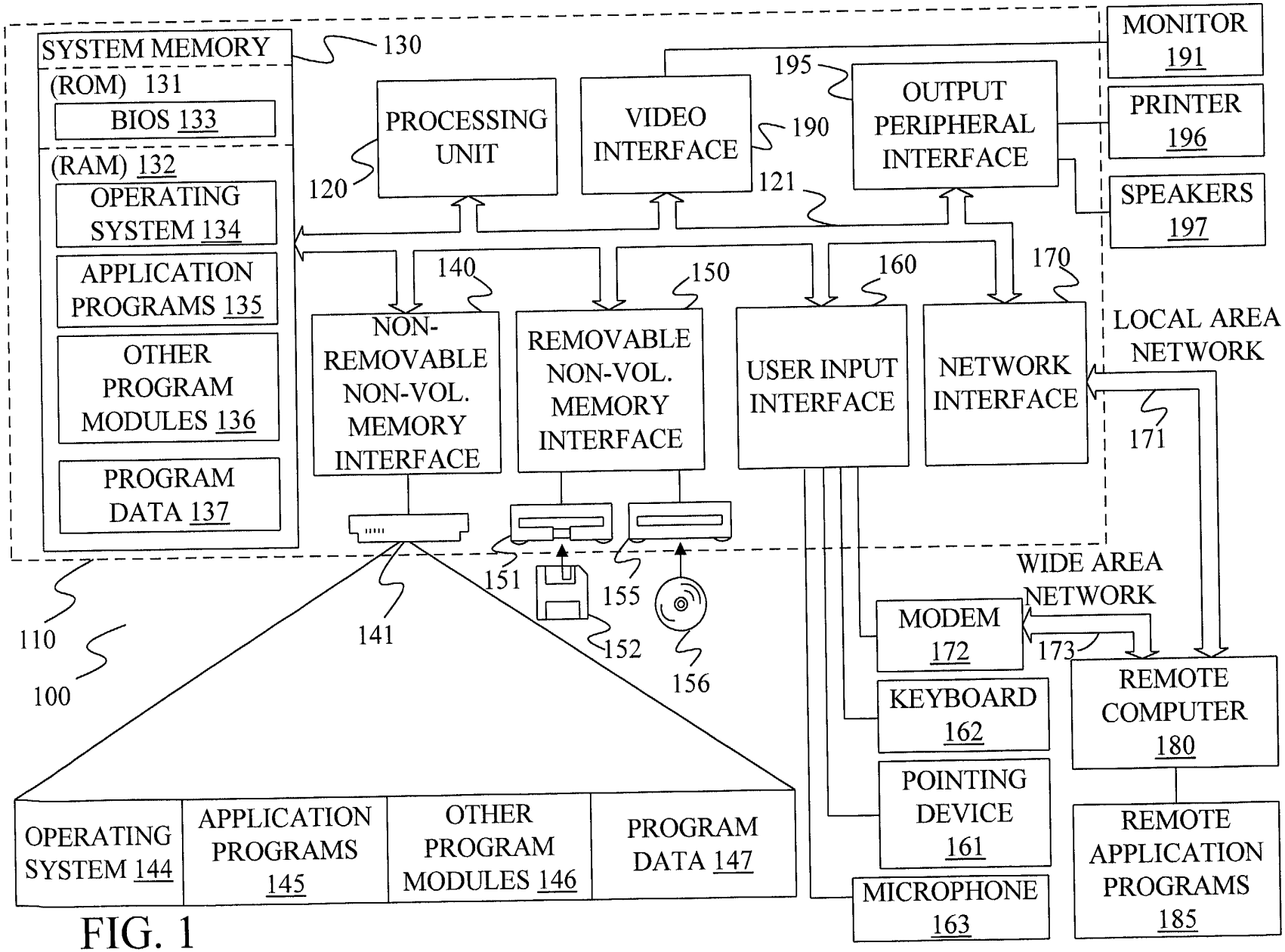

SYSTEM MEMORY
130
(ROM) 131
BIOS 133
(RAM) 132
OPERATING SYSTEM 134
APPLICATION PROGRAMS 135
OTHER PROGRAM MODULES 136
PROGRAM DATA 137
PROCESSING UNIT
120
VIDEO INTERFACE
190
195
OUTPUT PERIPHERAL INTERFACE
121
MONITOR 191
PRINTER 196
SPEAKERS 197
140
150
160
170
NON-REMOVABLE NON-VOL. MEMORY INTERFACE
REMOVABLE NON-VOL. MEMORY INTERFACE
USER INPUT INTERFACE
NETWORK INTERFACE
LOCAL AREA NETWORK
171
WIDE AREA NETWORK
MODEM 172
173
KEYBOARD 162
POINTING DEVICE 161
MICROPHONE 163
REMOTE COMPUTER 180
REMOTE APPLICATION PROGRAMS 185
110
100
141
151
155
152
156
OPERATING SYSTEM 144
APPLICATION PROGRAMS 145
OTHER PROGRAM MODULES 146
PROGRAM DATA 147

FIG. 1

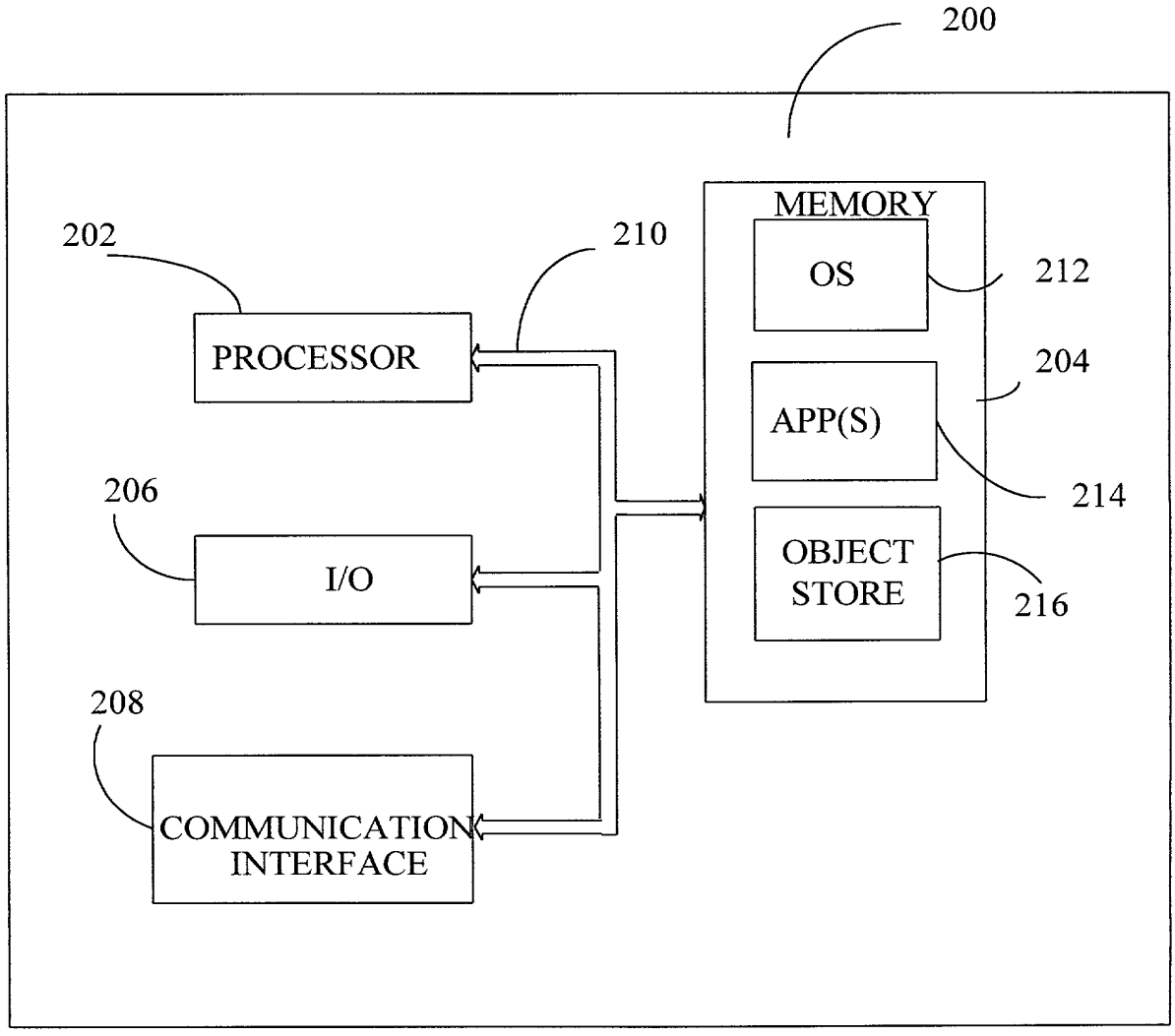

200
MEMORY
202
210
OS
212
PROCESSOR
204
APP(S)
214
206
I/O
OBJECT STORE
216
208
COMMUNICATION INTERFACE

FIG. 2

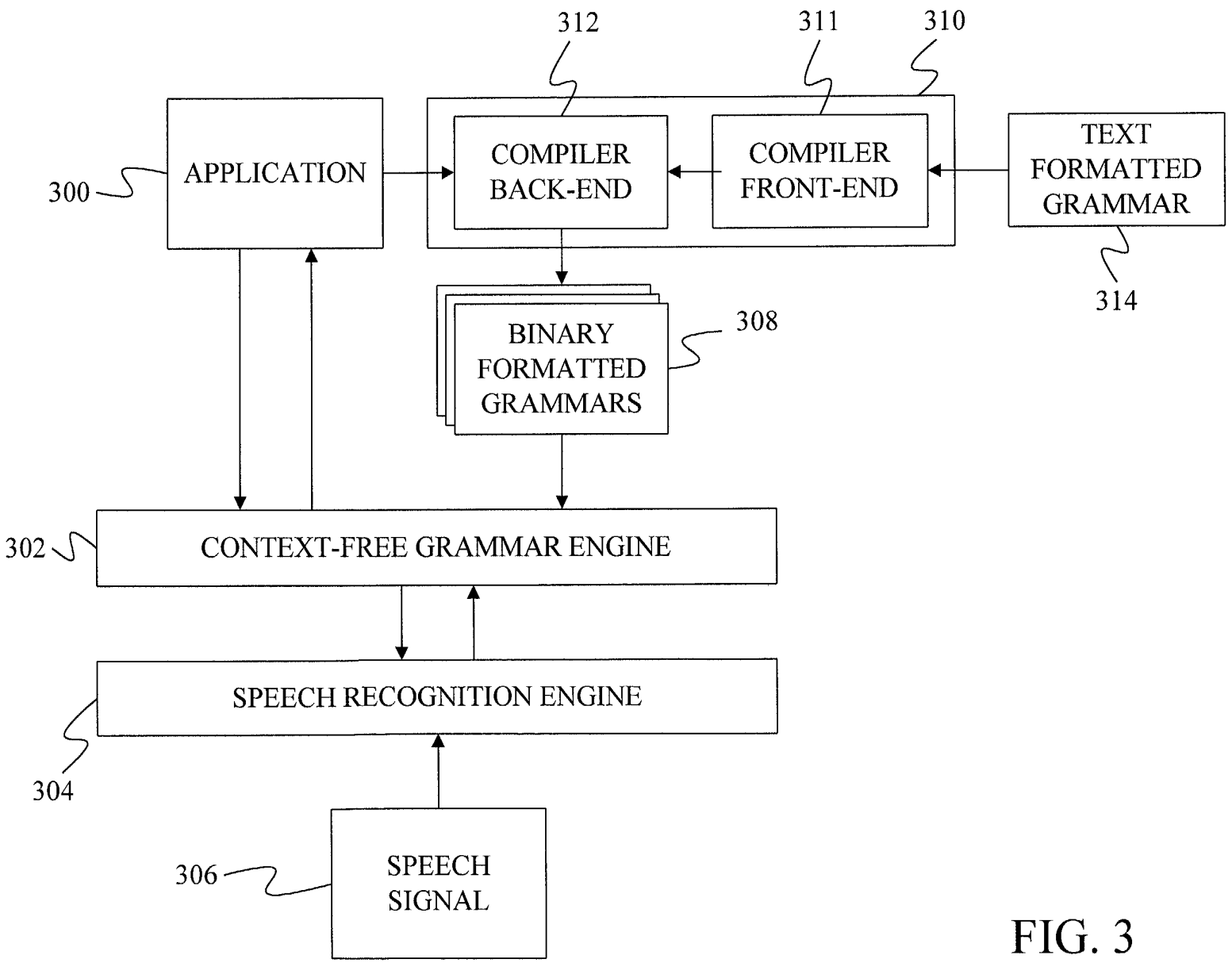

312
311
310
APPLICATION
300
COMPILER BACK-END
COMPILER FRONT-END
TEXT FORMATTED GRAMMAR
314
BINARY FORMATTED GRAMMARS
308
302
CONTEXT-FREE GRAMMAR ENGINE
SPEECH RECOGNITION ENGINE
304
306
SPEECH SIGNAL

FIG. 3

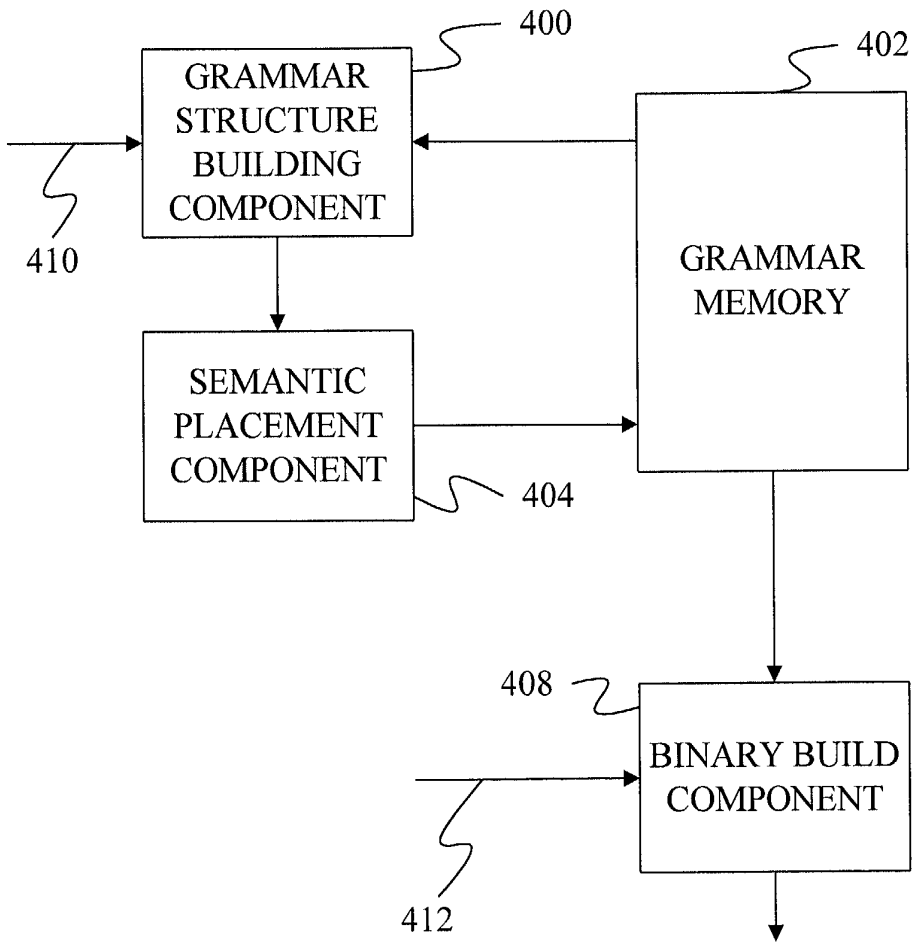

400
402
GRAMMAR STRUCTURE BUILDING COMPONENT
410
GRAMMAR MEMORY
SEMANTIC PLACEMENT COMPONENT
404
408
BINARY BUILD COMPONENT
412

FIG. 4

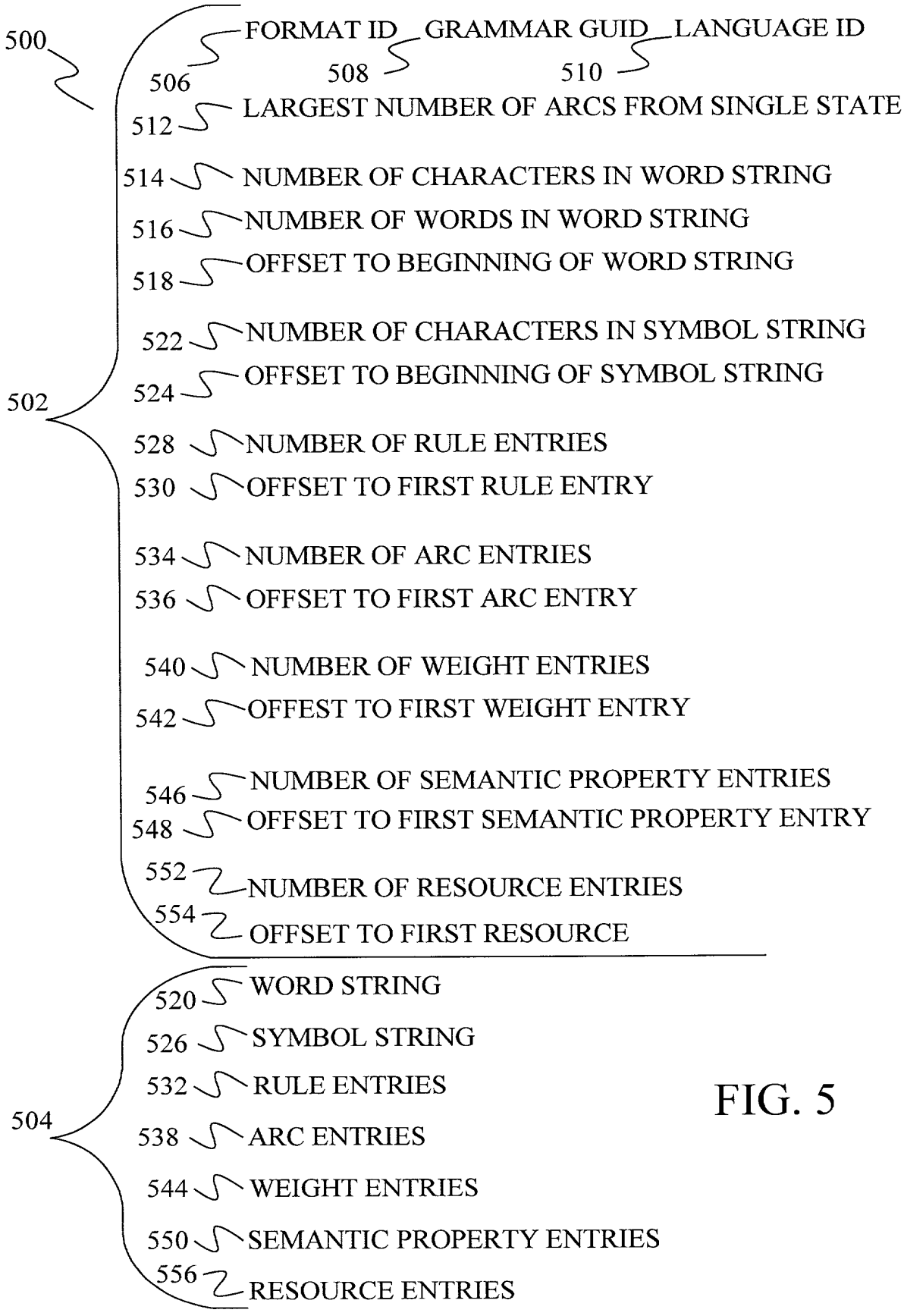

500
FORMAT ID
GRAMMAR GUID
LANGUAGE ID
506
508
510
LARGEST NUMBER OF ARCS FROM SINGLE STATE
512
514
NUMBER OF CHARACTERS IN WORD STRING
516
NUMBER OF WORDS IN WORD STRING
518
OFFSET TO BEGINNING OF WORD STRING
522
NUMBER OF CHARACTERS IN SYMBOL STRING
524
OFFSET TO BEGINNING OF SYMBOL STRING
502
528
NUMBER OF RULE ENTRIES
530
OFFSET TO FIRST RULE ENTRY
534
NUMBER OF ARC ENTRIES
536
OFFSET TO FIRST ARC ENTRY
540
NUMBER OF WEIGHT ENTRIES
542
OFFEST TO FIRST WEIGHT ENTRY
546
NUMBER OF SEMANTIC PROPERTY ENTRIES
548
OFFSET TO FIRST SEMANTIC PROPERTY ENTRY
552
NUMBER OF RESOURCE ENTRIES
554
OFFSET TO FIRST RESOURCE
520
WORD STRING
526
SYMBOL STRING
532
RULE ENTRIES
504
538
ARC ENTRIES
544
WEIGHT ENTRIES
550
SEMANTIC PROPERTY ENTRIES
556
RESOURCE ENTRIES

FIG. 5

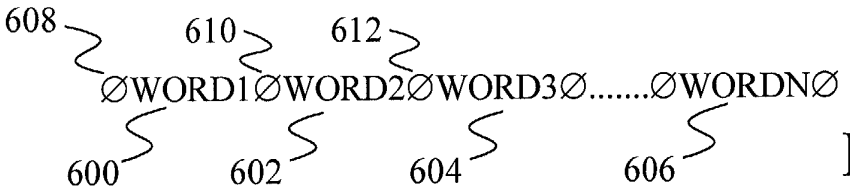


FIG. 6

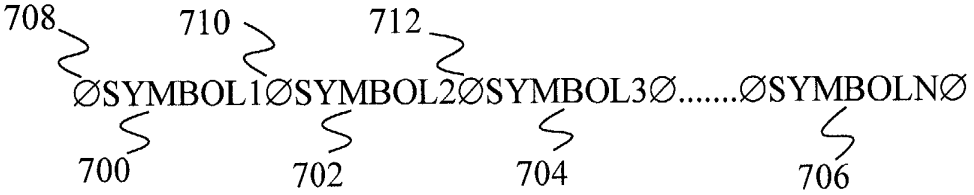


FIG. 7

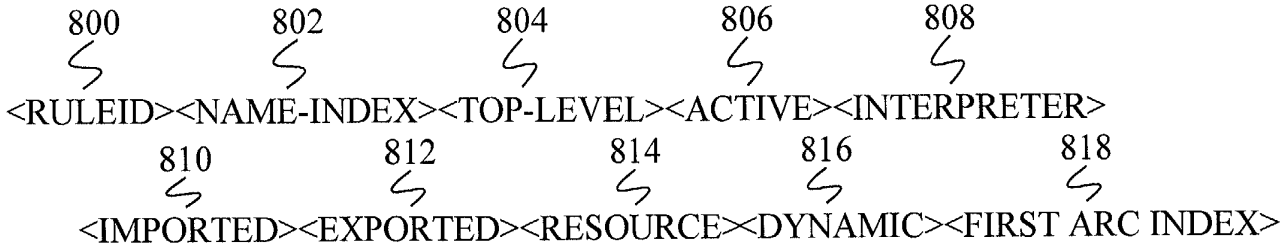


FIG. 8

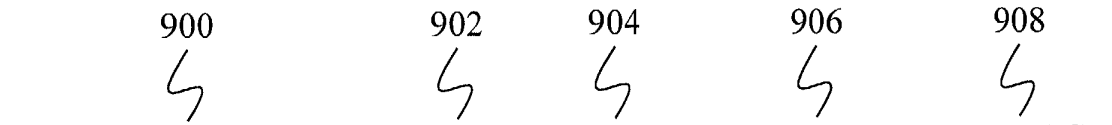


FIG.9

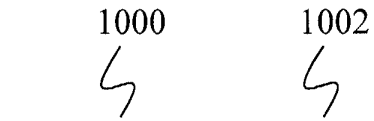


FIG. 10

FIG. 12

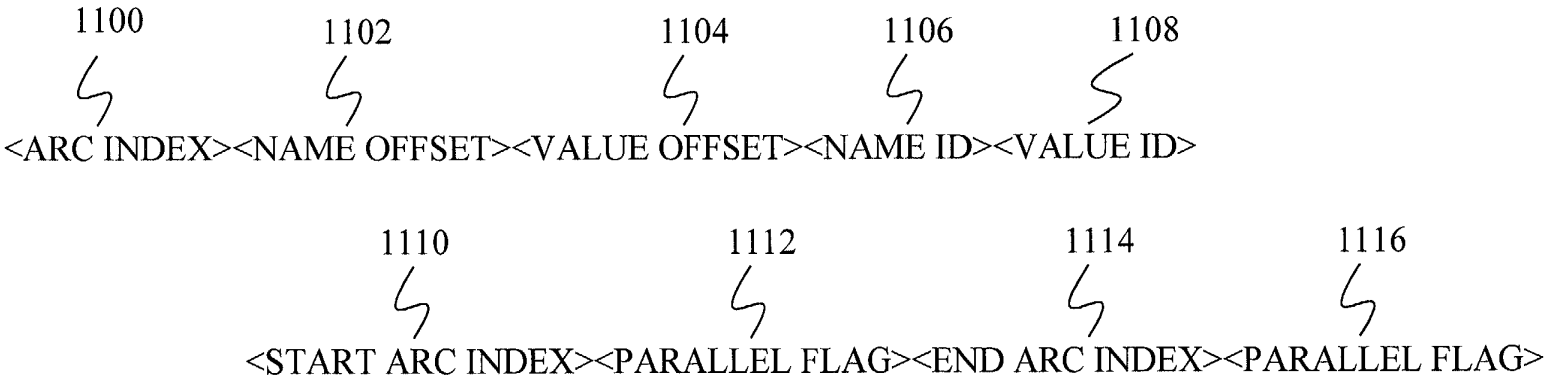


FIG. 11

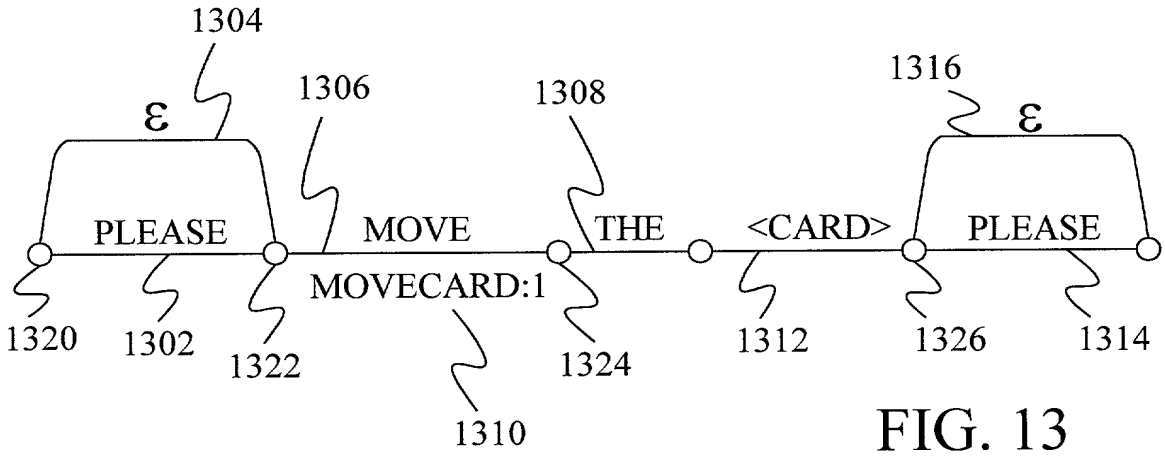


FIG. 13

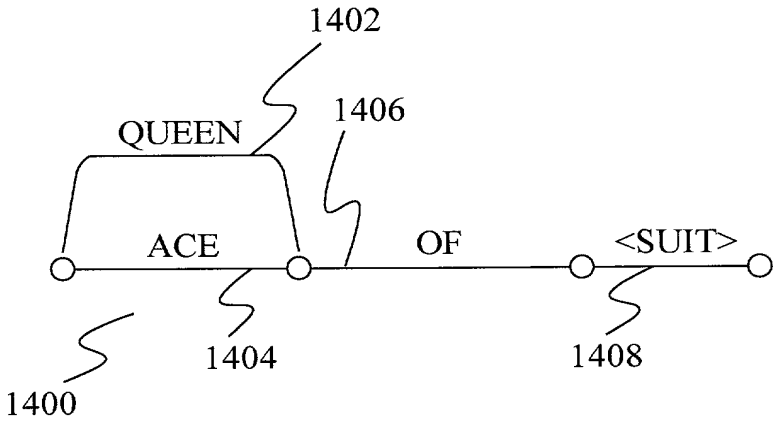


FIG. 14

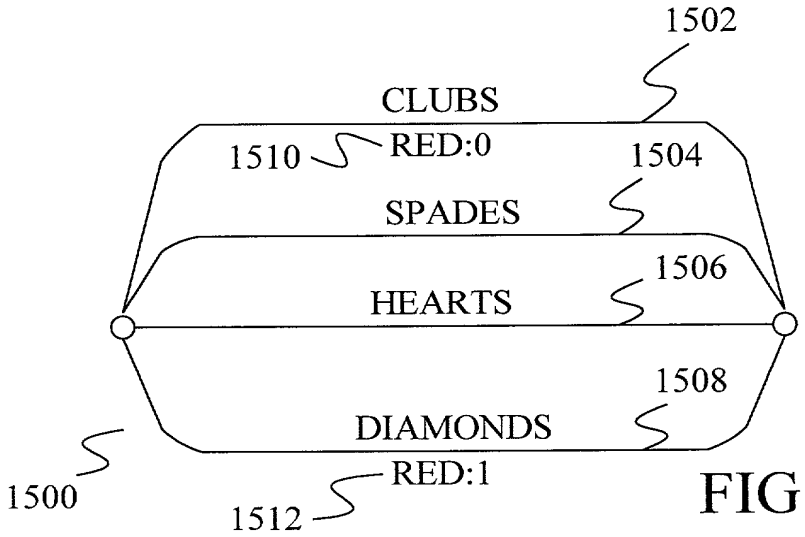


FIG. 15

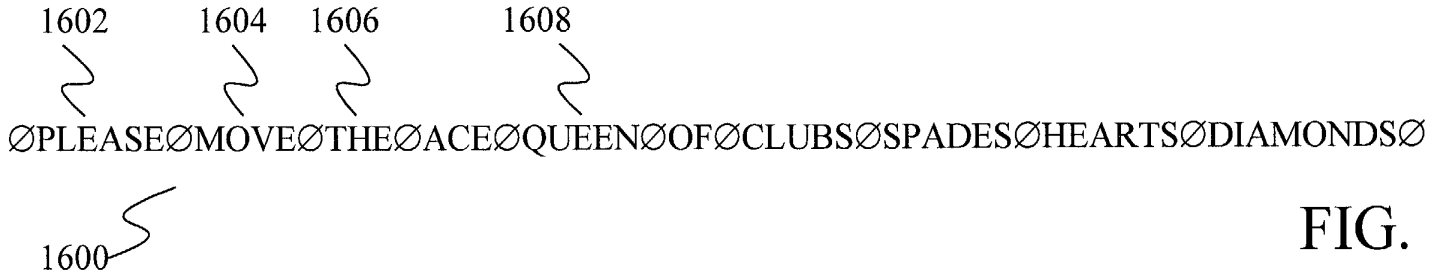


FIG. 16

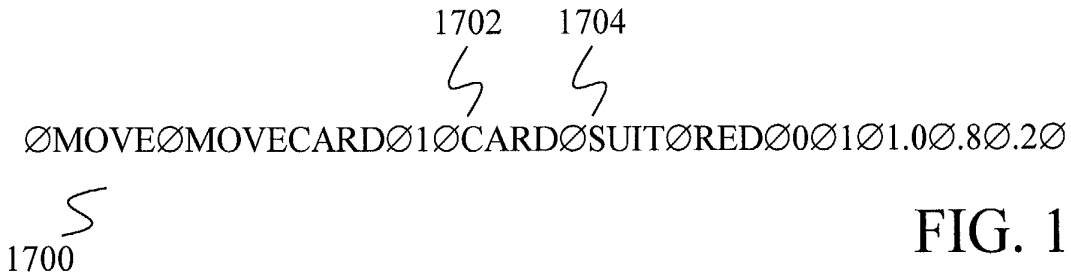


FIG. 17

1806 1808 1810 1812 1814 1816 1818 1820 1822

	RULE ID	NAME INDEX	TOP	ACTIVE	INTERPT	IMPORT	EXP	RES	DYN	FIRST ARC INDEX
1800	01	01	1	1	0	0	1	0	0	01
1802	02	17	0	1	0	0	1	0	0	08
1804	03	22	0	1	0	0	1	0	0	12

FIG. 18

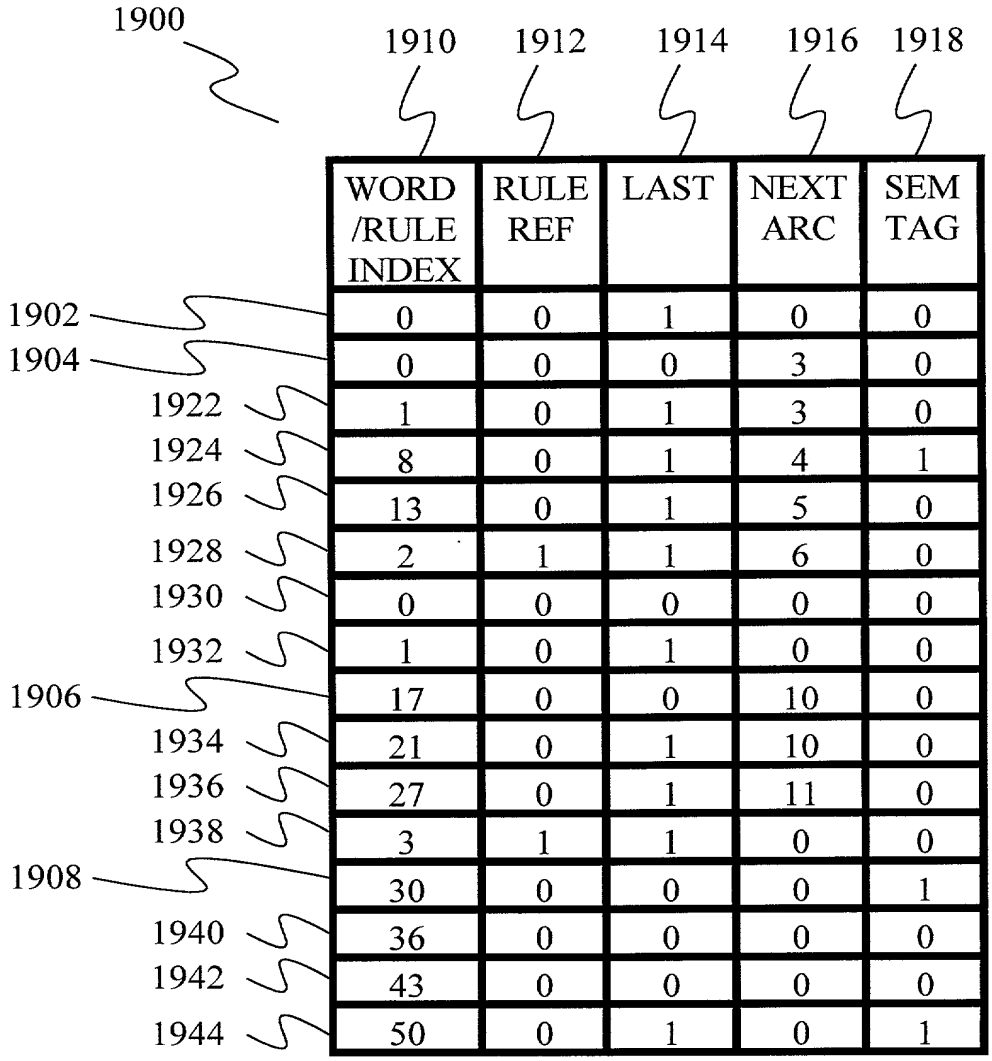

1900
1910
1912
1914
1916
1918
WORD /RULE INDEX
RULE REF
LAST
NEXT ARC
SEM TAG
1902
1904
1922
1924
1926
1928
1930
1932
1906
1934
1936
1938
1908
1940
1942
1944
0 0 1 0 0
0 0 0 3 0
1 0 1 3 0
8 0 1 4 1
13 0 1 5 0
2 1 1 6 0
0 0 0 0 0
1 0 1 0 0
17 0 0 10 0
21 0 1 10 0
27 0 1 11 0
3 1 1 0 0
30 0 0 0 1
36 0 0 0 0
43 0 0 0 0
50 0 1 0 1

FIG. 19

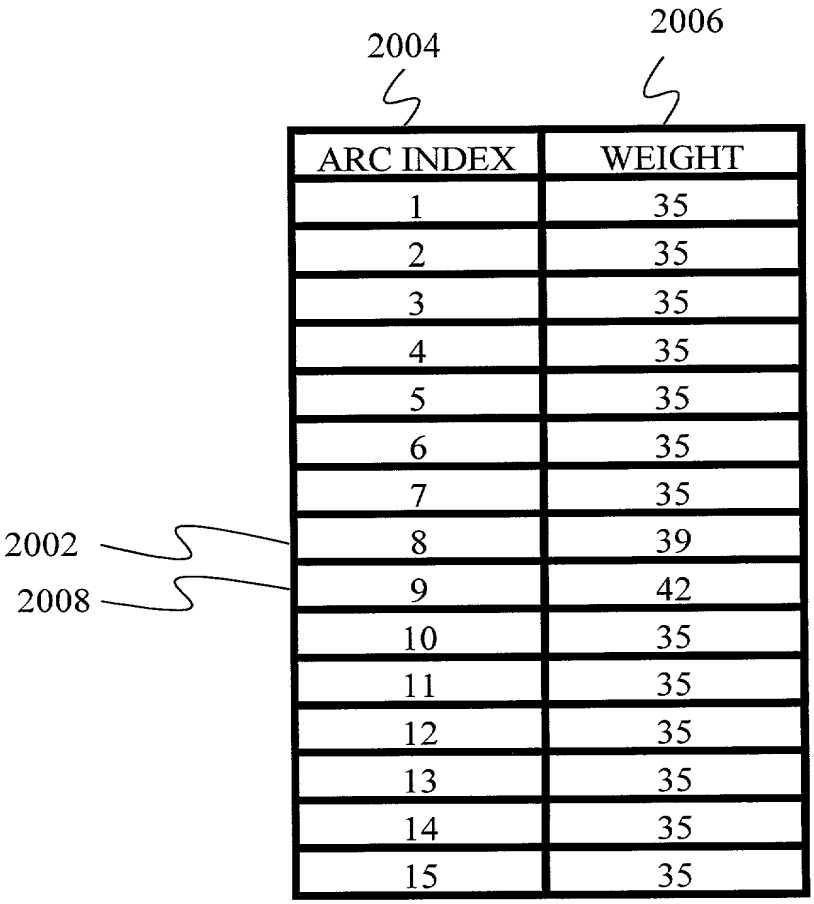
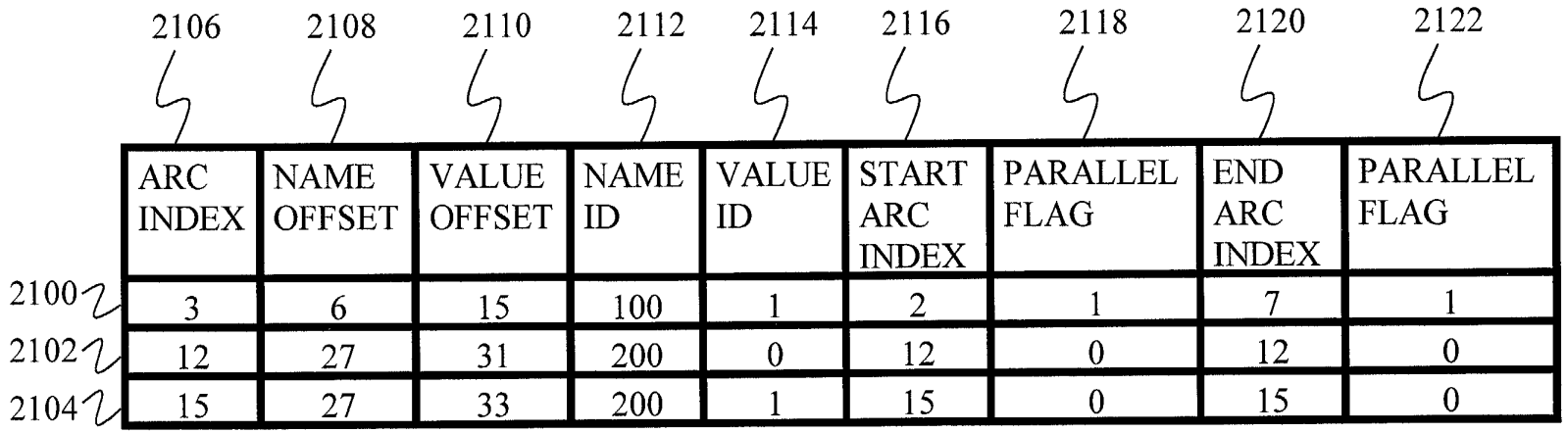

2004
2006
ARC INDEX
WEIGHT
1
35
2
35
3
35
4
35
5
35
6
35
7
35
8
39
9
42
10
35
11
35
12
35
13
35
14
35
15
35
2002
2008

FIG. 20

2000



	2106 ARC INDEX	2108 NAME OFFSET	2110 VALUE OFFSET	2112 NAME ID	2114 VALUE ID	2116 START ARC INDEX	2118 PARALLEL FLAG	2120 END ARC INDEX	2122 PARALLEL FLAG
2100	3	6	15	100	1	2	1	7	1
2102	12	27	31	200	0	12	0	12	0
2104	15	27	33	200	1	15	0	15	0

FIG. 21